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Final Report
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Effect of Variety and Moisture Level at Harvesting on the Proximate Composition of Field Corn for Dairy Silage III

By the Saskatchewan Corn Committee
And funded by
The Agriculture Development Fund

Effect of Variety and Moisture Level at Harvesting on the Proximate Composition of Field Corn for Dairy Silage III

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Saskatchewan Corn Committee

Introduction

1988 was the third year of a project designed to provide yield and proximate composition data on field corn harvested for silage. Ten varieties were chosen as suitable for silage production when grown under irrigated conditions. Information is also being collected on the effect of stage of maturity at harvesting. Repeating the project over successive years will provide information with respect to growing season. Environmental temperature would be expected to have the largest seasonal effect on corn grown under irrigation.

Objectives

To determine the proximate composition of ten varieties of field corn harvested for silage at three different stages of maturity. (1988).

Experimental

One hundred and twenty experimental plots of corn were grown at Outlook during the summer of 1988. The plots contained ten varieties to be harvested at three moisture levels in four replications (10x3x4=120). The plots were seeded on May 3, 1988. Varieties were randomly assigned within the ten plot units and level of moisture at harvesting randomly assigned to the ten plot units. Samples were collected when it was estimated that the designated moisture level had been reached. Samples were sent to Saskatoon to be analyzed by the Saskatchewan Feed Testing Laboratory. The same experimental plan was followed in each of the three years 1986 to 1988. Samples were analyzed for neutral detergent fiber in 1988 only.

Results and Discussion

Samples were collected on August 15, 1988 for the 85% moisture level, August 29 for the 75% moisture and on September 13 and 15 for the 65% moisture level. The harvest dates were earlier than in previous years but the seeding date was May 3, 1988 vs May 21 in 1986. The average actual moisture content at all three harvest dates was lower than anticipated (Table 1). The crude protein content of the samples harvested at the 85% level was significantly higher than the 75% level. Seventy-five % moisture samples contained significantly more protein than the 65% samples. Corn sampled at the 65% level had the highest acid detergent fiber (ADF) content while the 75% corn had the lowest ADF levels. Neutral detergent fiber levels increased as moisture levels decreased.

Variety did have an effect on actual moisture content (Table 2) indicating a difference in rate of maturity. There were some variety differences in protein and neutral-detergent fiber with a general trend of higher protein-lower NDF and vice versa.

The standard deviation and range for each nutritive variable is shown in Table 3. The standard deviations indicate more variation in nutritive content between samples as the moisture level at harvesting decreases. The change in degree of variation according to stage of maturity has been noted in the two previous years as well.

Harvesting at the eighty-five percent moisture level resulted in the lowest dry matter yield (Table 4).

There was not as much yield difference between moisture levels as was noted in previous years (Table 5). Lower overall yields in 1988 probably reflect the effect of higher environmental temperatures. Variety did affect yield with PG-SX104, PIC-2488 and the P-3995 averaging less than 9.5 tonnes of dry matter per hectare in 1988 (Table 4).

There was more difference in dry matter protein content noted between moisture levels in 1988 (Table 5). This would have been at least partially due to the degree of maturation as indicated by the actual moisture content.

Summary

Stage of maturity at harvesting has a significant effect on the nutritive value of whole plant corn for silage. Protein, calcium and phosphorus levels decline while fiber levels increase as the plant matures.

Variety did have a significant effect on crude protein and neutral-detergent fiber levels in 1988. There is a variety effect on dry matter yield.

Results from the three year corn study indicate that the 75% moisture level at harvesting is optimum in terms of nutritive value and dry matter yield of silage.

Funding

The project was funded by the Saskatchewan Agricultural Development Fund (Irrigation).

Table 1. Effect of moisture level at harvesting on the proximate composition[1] of corn samples. Silage quality corn study - 1988

Target Moisture Level, %	Actual Moisture %	% of dry matter				
		CP	Ca	P	ADF[2]	NDF[3]
Eighty-five	80.3[a]	9.27[a]	.32[a]	.21[a]	31.1[ab]	60.4[c]
Seventy-five	72.9[a]	8.05[b]	.31[a]	.19[b]	30.3[b]	62.9[b]
Sixty-five	60.3[c]	6.61[c]	.29[b]	.17[c]	32.2[a]	68.8[a]
SE_x	0.31	0.05	.003	.0017	0.20	0.17

[1] Corn samples were analyzed by the Saskatchewan Feed Testing Laboratory, Saskatoon.

[2] Acid Detergent Fiber

[3] Neutral Detergent Fiber

[a-c] Means in the same column with different letters are significantly different ($P<0.05$).

Table 2. Effect of variety on the proximate composition[1] of corn samples
Silage quality corn study - 1988

Variety	% Moisture	% of dry matter				
		CP	Ca	P	ADF	NDF
DK-24	73.1^{abc}	8.20^{ab}	.34	.20	30.3	62.8^{bc}
DK-246	67.5^{cd}	7.91^{bc}	.30	.21	32.6	67.2^{a}
P-3953	76.3^{a}	7.82^{bc}	.32	.18	32.6	62.8^{bc}
P-3960	71.3^{abcd}	7.91^{bc}	.30	.20	30.8	62.7^{bc}
P-3995	69.5^{bcd}	7.77^{bc}	.29	.18	29.9	63.2^{bc}
PG-SX95	74.9^{ab}	8.14^{ab}	.33	.18	31.3	63.7^{bc}
T-778	75.4^{a}	8.91^{a}	.33	.19	29.6	61.0^{c}
P-3996	67.1^{d}	7.79^{bc}	.29	.18	31.2	64.3^{ab}
PG-SX104	69.1^{cd}	7.23^{c}	.30	.18	32.7	66.8^{a}
PIC-2488	67.3^{d}	8.08^{abc}	.29	.19	30.9	65.8^{ab}

[1] Samples were analyzed by the Saskatchewan Feed Testing Laboratory, Saskatoon.

a-d Means in the same column followed by different letters are significantly different ($P<0.05$).

Table 3. Composition[1] of Whole Plant Corn for Silage, Silage Quality Corn Study 1988

Variety[2]	Moisture (%)			CP (% in DM)			ADF (% in DM)			NDF (% in DM)			Calcium (% in DM)			Phosphorus (% in DM)		
	Mean	S.D.[3]	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Ra
DK-24	73.1	8.46	55.3-82.8	8.20	1.23	6.18-9.97	30.3	2.82	26.5-37.1	62.8	3.95	58.4-69.9	.34	.09	.27-.61	.20	.02	.16-.
DK-246	67.5	12.22	50.6-79.8	7.91	1.14	5.76-9.46	32.6	2.05	27.7-35.8	67.2	4.60	60.9-75.1	.30	.02	.26-.32	.21	.02	.16-.
P-3953	76.3	4.34	69.9-81.7	7.82	1.24	6.11-9.70	32.6	2.30	28.1-35.5	62.8	2.60	58.8-67.8	.32	.03	.27-.39	.18	.02	.13-.
P-3969	71.3	10.59	47.8-81.9	7.91	1.20	6.48-9.78	30.8	1.54	28.0-33.3	62.7	4.25	53.9-67.2	.30	.04	.24-.36	.20	.02	.17-.
P-3995	69.5	9.91	53.6-80.2	7.77	0.90	6.37-9.02	29.9	2.85	24.7-34.2	63.2	3.87	57.7-69.3	.29	.04	.22-.33	.18	.02	.14-.
RG-SX95	74.9	5.76	66.8-81.4	8.14	1.36	5.93-10.10	31.3	2.21	27.3-34.1	63.7	3.49	59.6-69.4	.33	.04	.29-.41	.18	.02	.1
P-778	75.4	6.18	66.4-83.5	8.91	1.56	6.71-11.68	29.6	2.24	24.6-33.4	61.0	2.31	57.6-65.0	.33	.03	.28-.39	.19	.02	..
P-3996	67.1	12.32	45.9-81.2	7.79	1.09	5.73-9.79	31.2	2.82	27.4-37.3	64.3	5.34	56.7-73.7	.29	.03	.23-.33	.18	.03	.1
RG-SX104	69.1	9.51	53.7-80.0	7.23	1.41	4.63-8.84	32.7	3.13	28.4-38.0	66.8	5.54	61.6-77.6	.30	.02	.26-.33	.18	.04	.
PIC-2488	67.3	11.63	48.0-80.1	8.08	1.32	6.22-10.17	30.9	2.72	27.6-35.6	65.8	5.17	57.7-72.8	.29	.03	.24-.33	.19	.03	.13-.
Moisture Level[4]																		
35%	80.3	1.39	78.3-83.5	9.27	0.78	7.71-11.68	31.1	2.18	24.7-35.5	60.4	2.20	53.9-66.0	.32	.04	.26-.41	.21	.02	.16-.
30%	72.9	4.37	60.8-78.9	8.05	0.49	7.20-9.07	30.3	2.25	26.5-35.6	62.9	2.16	59.0-68.3	.31	.01	.27-.33	.19	.01	.16-.
25%	60.3	7.63	45.9-72.1	6.61	0.68	4.63-8.53	32.2	3.09	24.64-38.0	68.8	3.67	60.5-77.6	.29	.06	.22-.61	.17	.03	.09-.

[1] Corn samples were analyzed by the Saskatchewan Feed Testing Laboratory, Saskatchewan
[2] 12 observations for each variety
[3] Standard Deviation
[4] 40 observations for each moisture level

Table 4. Effect of variety and moisture level at harvesting on the dry matter yield of corn silage. Silage quality corn study - 1988

Variety	85%	75%	65%	Average
	----------tonnes/hectare----------			
DK-24	9.3	11.4	12.2	11.0
DK-246	9.3	10.1	11.0	10.2
P-3953	10.9	13.1	13.7	12.5
P-3969	10.5	11.8	10.2	10.8
P-3995	8.9	10.1	8.7	9.2
PG-SX95	9.2	10.9	12.1	10.7
T-778	10.1	12.0	12.9	11.7
P-3996	9.5	10.5	8.5	9.5
PG-SX104	8.4	9.8	8.4	8.8
PIC-2488	9.0	9.0	8.3	8.8
Mean	9.5	10.7	10.6	10.3

Table 5 Effect of season on the composition[1] and dry matter yield of corn harvested at three moisture levels. Silage quality studies 1986-1988

Target Moisture Level, %	Days to Harvest			Actual Moisture, %			% CP in dry matter			Dry matter yield tonnes/hectare		
	1	2	3	1	2	3	1	2	3	1	2	3
Eighty-five	106	108	104	78.2	82.6	80.3	9.4	9.7	9.3	11.3	9.6	9.5
Seventy-five	131	123	118	74.7	79.6	72.9	8.5	8.7	8.1	14.4	12.5	10.7
Sixty-five	142	134	135	65.7	73.8	60.3	8.4	7.6	6.6	13.8	13.6	10.6

[1] Samples were analyzed by the Saskatchewan Feed Testing Laboratory, Saskatoon.

[2] 1 - 1986; 2 - 1987; 3 - 1988

D-86-03-0153

ANNUAL PROGRESS REPORT - FEBRUARY 15, 1987

ADF PROJECT NO. D-86-03-~~0142~~ 0153

DEMONSTRATION OF FEED VALUE OF SILAGE CORN RELATED TO HARVEST STAGE AND VARIETIES

1. SUMMARY

Ten recommended corn varieties were studied under irrigation at Outlook in 1986 to ascertain quality attributes along with other agronomic traits when harvested for silage at three maturity stages (85, 75 and 65% moisture). Varieties showed maturity differences. Stage of maturity for individual varieties had a significant effect on nutritive value of the silage. Protein, calcium and phosphorus levels declined while fibre levels increased with maturity. This is the first of a three year study and early indications are that an intermediate moisture level of 75% appears optimum in terms of nutritive value and dry matter yield of the silage. In addition, seventeen promising and recommended hybrids were grown for silage and grain and the agronomic attributes measured. The results were tabulated and distributed through the Sask. Corn Committee.

2. BACKGROUND

The area served is marginal for successful corn production. Early maturing hybrids, high yield potential and low heat unit requirements are desirable. The advantages of early harvest and overall harvest stage effects were considered worth studying. The work conducted in 1986 was proposed by the Sask. Corn Committee and supported by the Saskatchewan Cattle Feeders Association. This research endeavour also made it possible to renew prior trials of promising varieties and potential varieties in the Outlook area.

2(b) WORKPLAN 1987

With similar support as in 1986, the identical harvest stage study will be repeated in 1987. The Commercial and Preliminary corn trials for silage and grain will be conducted again at Outlook. Very promising hybrids are now available from the Lethbridge and Ottawa breeding programs and requests have been received to assess these hybrids at Outlook.

2(c) OBSERVATIONS REPORTED

Three summaries are attached which provide actual agronomic data and interpretation.

3. USE OF DEMONSTRATION

The trials are providing useful information on varietal performance and management requirements for corn production under irrigation in the Outlook area. The results to date have all been published for professional and farmer usage. The first year data pertaining to quality attributes was prepared primarily by University of Saskatchewan Animal Science personnel. The funding source was acknowledged and the information included in the 1987 report "Dairy Cattle Management Feeding and Research Results".

The trials are staked as to variety, hybrid or treatment for demonstration purposes.

4. RECEIPTS AND EXPENSES
All records are at the Irrigation Centre Outlook - See Bill King.

5. PERSONNEL
Dr. D. Christenson - Head, Animal Science, University of Saskatchewan
W. King - Outlook, Saskatchewan
W.L. Crowle - Saskatoon, Saskatchewan
J. Korol - Saskatoon, Saskatchewan

6. CAPITAL ITEMS
None purchased in 1986.

W.L. Crowle
Saskatoon Research Station

Effect of Variety and Moisture Level at Harvesting on the Proximate Composition of Field Corn for Dairy Silage

Principal Funding - Agriculture Development Fund (Irrigation)
Saskatchewan Corn Committee

Introduction

Field corn is utilized for dairy silage particularly in the irrigated areas of the province. There is interest in the nutritive value of corn harvested for silage at different stages of maturity. Moisture level declines as the plant matures. There are a number of varieties of corn suitable for silage, but there is no data concerning the proximate composition of the different varieties.

Objectives

To determine the proximate composition of ten varieties of field corn harvested for silage at three different stages of maturity.

Experimental Plan

One hundred and twenty experimental plots of corn were grown at Outlook during the summer of 1986. The plots contained 10 varieties to be harvested at 3 moisture levels in 4 replications (10 x 3 x 4 = 120). Varieties were randomly assigned within the 10 plot units and level of moisture at harvesting randomly assigned to the 10 plot units. Sample collections occurred when it was estimated that the designated moisture level had been reached. Samples were analyzed by the Saskatchewan Feed Testing Laboratory in Saskatoon.

Results and Discussion

Samples were collected on September 4, 1986 for the 85% moisture level, September 25, 29 and 30 for the 76% moisture and on October 10 for the 65% moisture level. Proximate composition of the samples by moisture level is given in Table 1. The average actual moisture content of the eighty-five percent level was 78% indicating that samples could have been harvested earlier. The dry matter, protein, calcium and phosphorus content of samples harvested at the 85% level were significantly higher than at the 76 or 65% level. The acid-detergent fiber (ADF) content of the corn sampled at the 65% moisture level was significantly higher than it was at the 76 or 86% levels.

Variety did have an effect on actual moisture content (Table 2) indicating that some varieties mature faster than others. There were no variety differences in protein, calcium, phosphorus or acid-detergent fiber when the data was analyzed by Scheffe's Test. Protein content tended to be higher for varieties that were harvested at a higher actual moisture level. This indicates an effect of stage of maturity on protein content of the dry matter.

Table 3 gives the standard deviation and range for each nutritive variable according to variety and moisture level. The increasing standard deviations noted with the decreasing moisture level at harvesting indicates more variability in nutritive content between samples as the stage of maturity increases.

Dry matter yield in tonnes per hectare are given in Table 4. Harvesting at the highest moisture level resulted in the lowest dry matter yields. This was expected as the corn grain was immature at the high moisture level. At the lowest moisture level (65%) some of the yield may have been lost due to the loss of bottom leaves and/or frost damage. Variety did affect the yield with the P3995 and A-PIC 2488 yielding the lowest at each moisture level.

Summary

Stage of maturity as indicated by moisture level at harvesting has a significant effect on the nutritive value of whole plant corn for silage. Protein, calcium and phosphorus levels decline while fiber levels increase as the plant matures.

The only significant effect of variety was on actual moisture content at harvesting indicating variety differences in rate of maturity. Variety did not significantly affect protein, fiber, calcium or phosphorus levels.

Impact on Industry

Results indicate that the 75% moisture level is optimum in terms of nutritive value and dry matter yield for harvesting whole plant corn for silage. Different varieties mature at different rates but variety is not as important as moisture content at harvesting for maximizing the nutritive value of corn silage.

Table 1. Effect of moisture level at harvesting on the proximate composition of corn samples. Sask. Corn Committee 1986.

Target Moisture Level, %	Actual Moisture %	% of dry matter CP	Ca	P	ADF
Eighty-five	78.2[a]	9.39[a]	.34[a]	.22[a]	29.9[b]
Seventy-five	74.7[b]	8.46[b]	.27[b]	.21[b]	29.2[b]
Sixty-five	65.7[c]	8.43[b]	.28[b]	.19[c]	32.2[a]
SEx	3.6	0.65	.002	.0002	5.8

a-c Means in the same column with different superscript letters are significantly different (P<0.05).

Table 2. Effect of variety on the proximate composition[1] of corn samples. Sask. Corn Committee 1986.

Variety	% moisture	% of dry matter CP	Ca	P	ADF
DK24	75.2[ab]	9.25	.31	.21	30.7
T778	74.6[ab]	9.58	.31	.21	30.5
P3995	71.3[c]	8.66	.29	.20	29.1
A-PIC 2488	71.2[c]	8.95	.30	.21	31.3
DK246	70.3[c]	8.29	.29	.21	30.7
P3996	70.8[c]	8.61	.29	.20	29.7
P3969	73.3[abc]	8.34	.31	.20	29.9
PG SX95	74.6[ab]	8.90	.32	.21	30.3
P3953	75.5[a]	8.63	.31	.20	31.0
PG SX104	72.1[bc]	8.41	.26	.22	31.0
SEx	3.6	0.65	.002	.0002	5.76

1 Samples were analyzed by the Saskatchewan Feed Testing Laboratory, Saskatoon.

a-c Means in the same column with different superscript letters are significantly different. (P<0.05).

Table 3. Composition[1] of whole plant corn for silage. Sask Corn Committee 1986

Variety[2]	Actual Moisture (%)			CP (% in DM)			ADF (% in DM)			Calcium (% in DM)			Phosphorus (% in DM)		
	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Ran
DK24	75.2	4.72	67.7-82.1	9.25	.92	7.39-10.78	30.7	2.96	26.6-36.5	.31	.06	.21-.41	.21	.02	.17-.24
T778	74.6	6.21	63.5-80.6	9.58	1.01	8.10-11.10	30.5	1.85	27.1-34.7	.31	.07	.21-.40	.21	.02	.19-.23
P3995	71.3	6.09	61.0-79.6	8.66	.79	7.20- 9.72	29.1	2.25	25.4-33.1	.29	.07	.18-.37	.20	.02	.17-.23
A-PIC 2488	71.2	6.05	61.9-78.7	8.95	.91	7.43-10.56	31.3	4.13	26.1-40.4	.30	.05	.22-.39	.21	.03	.16-.26
DK246	70.3	7.11	59.0-78.8	8.29	.80	7.17- 9.73	30.7	2.15	25.9-33.1	.29	.05	.21-.37	.21	.02	.19-.23
P3996	70.8	6.23	60.7-78.8	8.61	.98	6.20- 9.76	29.7	2.98	25.6-35.7	.29	.05	.19-.34	.20	.02	.18-.23
P3969	71.3	5.61	64.2-78.8	8.34	1.16	6.76-10.12	29.9	1.46	26.0-30.1	.31	.07	.20-.44	.20	.03	.16-.25
PG SX95	74.6	5.61	65.5-83.8	8.90	.68	7.86-10.06	30.3	1.73	27.8-32.6	.32	.05	.21-.39	.21	.03	.17-.24
P3953	75.5	5.06	68.2-84.3	8.63	.92	6.70- 9.73	31.0	2.34	27.7-35.5	.31	.05	.23-.39	.20	.03	.16-.26
PG SX104	72.2	5.65	61.5-78.6	8.41	.88	6.98- 9.70	31.0	2.83	27.5-36.6	.26	.06	.18-.37	.22	.02	.18-.24
Moisture[3] level															
85%	78.2	2.20	72.8-84.3	9.39	.61	8.27-10.78	29.9	1.98	25.4-34.7	.34	.03	.28-.44	.22	.02	.18-.29
76%	74.7	2.64	70.3-78.7	8.46	.83	6.70-10.56	29.2	2.15	25.6-35.5	.27	.05	.18-.34	.21	.02	.18-.24
65%	65.7	3.30	59.0-71.5	8.43	1.07	6.20-11.10	32.2	2.91	27.7-40.4	.28	.05	.18-.40	.19	.02	.16-.22

[1] Analyzed by Saskatchewan Feed Testing Laboratory, Saskatoon.
[2] 12 observations for each variety.
[3] 60 observations for each moisture level.

S.D. - Standard Deviation

Table 4. Effect of variety and moisture level at harvesting on the dry matter yield of corn silage. Sask. Corn Committee 1986.

Variety	85%	76%	65%
	----------tonnes/hectare----------		
DK24	12.5	15.3	15.7
P3995	9.8	12.7	11.9
P3953	12.0	14.9	15.2
A-PIC 2488	9.7	11.3	11.5
DK246	12.0	14.3	12.8
PG SX104	11.3	16.0	12.6
P3969	11.4	14.1	14.6
P3996	10.5	13.7	12.7
T778	12.8	17.0	16.8
PG SX95	11.3	14.6	13.9

Silage Quality Corn Study - 1986
Agriculture Canada Research Station, Saskatoon, Sask.
Irrigated Trial - Outlook

Date Seeded: May 21, 1986

Plot Size: 6.1m X 0.75m

	85% Moisture				76% Moisture				65% Moisture			
Variety	Popn ,000/ha	M %	Y t/h dry	Y/M index	Popn ,000/ha	M %	Y t/h dry	Y/M index	Popn ,000/ha	M %	Y t/h dry	Y/M index
DK-24	67.8	78.8	12.5	1.6	67.8	74.0	15.3	2.1	67.2	64.1	15.7	2.5
DK 246	68.8	76.1	12.0	1.6	68.8	70.1	14.3	2.1	66.7	57.7	12.8	2.2
T-778	67.2	78.8	12.8	1.6	68.3	74.2	17.0	2.3	66.1	64.6	16.8	2.6
P-3969	68.8	78.4	11.4	1.5	66.7	73.6	14.1	1.9	68.3	65.6	14.6	2.2
P-3953	68.3	78.2	12.0	1.5	68.3	73.7	14.9	2.0	68.3	66.7	15.2	2.3
P-3996	68.3	77.1	10.5	1.4	66.1	70.3	13.7	2.0	67.8	61.7	12.7	2.1
P-3995	68.3	76.2	9.8	1.3	67.8	70.6	12.7	1.8	68.3	61.4	11.9	1.9
SX-104	67.8	77.2	11.3	1.5	67.8	70.5	16.0	2.3	66.7	65.0	12.6	2.0
SX-95	66.7	78.0	11.3	1.4	66.7	74.2	14.6	2.0	66.1	64.0	13.9	2.2
PIC 2488	67.8	77.2	9.7	1.3	68.8	70.3	11.3	1.6	67.8	61.8	11.5	1.9
MEAN	68.0	77.6	11.3	1.5	67.7	72.1	14.4	2.0	67.3	63.3	13.8	2.2

Silage Quality Corn Study 1986
Agriculture Canada Research Station, Saskatoon, Sask.
Irrigated Trial - Outlook

Date Seeded: May 21, 1986 Plot Size: 62m X 0.75m

Variety	Average Moisture Level Popn .000/ha	Moist %	Yield T/HA dry	YM Index
DK 24	67.6	72.3	14.5	2.1
DK 246	68.1	68.0	13.0	2.0
T-778	67.2	72.5	15.5	2.2
P-3969	67.9	72.5	13.4	1.9
P-3953	68.3	72.8	14.1	2.0
P-3996	67.4	69.7	12.3	1.8
P-3995	68.1	69.4	11.4	1.7
SX-104	67.4	70.9	13.3	1.9
SX-95	66.5	72.1	13.2	1.9
PIC 2488	68.1	69.7	10.8	1.6
MEAN	67.7	71.0	13.2	1.9
Moisture stages irrespective of variety:				
L.S.D. .05	NS	2.00	1.25	2.54
L.S.D. .01	NS	3.03	1.90	3.85
Varieties irrespective of moisture stages:				
L.S.D. .05	NS	2.05	1.23	1.98
.01	NS	2.81	1.68	2.72
C.V.	2.5	3.7	11.4	15.0

SCC SILAGE CORN RECOMMENDATION TEST - 1986

Outlook, Saskatchewan

Date Seeded: May 20, 1986 Plot Size: 6.1m X 0.

Date Harvested: September 19, 1986

VARIETY	DAYS 50% SILK	POPN ,000/HA	MOIST %	YIELD T/HA (dry)	Y/M INDEX
P 3994	79	66.7	68.3	14.8	2.2
P 3959	79	68.3	64.7	15.4	2.4
PR K730	78	68.3	62.6	14.0	2.2
P 3957	70	68.8	58.9	11.1	1.9
PAG SX104	77	67.2	60.4	10.6	1.8
KWS SANTOS	77	66.7	60.1	11.6	2.0
KWS ZENIT	79	65.1	64.1	12.2	1.9
PR K025	79	66.7	70.2	16.4	2.3
P 3995	77	66.7	58.4	11.0	1.9
KWS RANA	78	68.3	63.5	15.7	2.5
KG K610	81	67.8	65.8	13.5	2.1
P 3996	74	68.8	63.8	13.7	2.1
NK PX9028	77	67.2	58.0	12.2	2.1
KG 44643	74	67.8	63.4	11.9	1.9
PIC 2435	78	67.8	62.4	12.9	2.1
P XCB51	78	66.7	58.6	11.0	1.9
DK 24	78	68.3	65.9	12.8	1.9
MEAN	77	67.5	62.9	13.0	2.1
L.S.D. - .05	2.8	NS	3.4	1.8	3.3
- .01	3.7	NS	4.6	2.4	4.4
C.V.	2.5	2.4	3.8	9.5	11.2

SCC GRAIN CORN RECOMMENDATION TEST - 1986

Outlook, Saskatchewan

Date Seeded: May 20, 1986 Plot Size: 6.1m X 0.

Date Harvested: October 10, 1986

VARIETY	DAYS 50% SILK	POPN ,000/HA	MOIST %	YIELD T/HA (dry)	Y/M INDEX
NK PX9028	79	61.8	29.5	4.4	2.3
P 3959	76	61.8	28.0	3.1	1.1
P 3995	75	60.8	31.7	4.0	1.3
PR K730	70	61.3	34.5	4.0	1.2
PIC 2435	79	60.8	48.1	3.9	.8
PR K025	75	61.8	36.2	3.4	.9
P 3957	77	59.2	27.7	3.9	1.4
KWS SANTOS	78	61.8	48.8	4.0	.8
KWS RANA	75	61.8	38.4	4.4	1.2
DK 24	70	60.2	39.0	4.1	1.1
P 3994	68	61.3	34.4	3.2	.9
KG K610	73	61.8	33.0	3.2	1.0
KG 4-4643	71	62.4	34.0	4.5	1.3
KWS ZENIT	73	60.2	41.5	2.9	.7
P 3996	72	60.8	29.5	3.8	1.3
PAG SX104	73	62.4	26.5	4.2	1.6
P XCB51	75	59.7	31.3	3.4	1.1
MEAN	74	61.2	34.9	3.8	1.2
L.S.D. - .05	2.8	NS	6.2	1.0	.6
- .01	3.7	NS	8.1	NS	NS
C.V.	2.7	2.5	12.5	18.5	43.4